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The Story Behind China's Rising Pork Prices

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Report Highlights:

Retail pork prices in China rose more than 50% during the June 2006 to June 2007 time period, while wholesale prices increased as much as 95%. Important factors behind the recent increase include a cyclical supply shortage, a severe disease outbreak among hogs in southern China, high grain prices and a general upward trend in meat consumption. As the most widely consumed meat in China, the high price of pork has gotten the attention of the China's policy makers, and could generate sales opportunities for the United States. Exports of U.S. pork to China (including Hong Kong) exceeded \$100 million in 2006, a record.

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Executive Summary

Retail pork prices in China have risen more than 50% during the June 2006-June 2007 period, while wholesale prices have increased as much as 95%. Important factors behind the recent increase include a cyclical supply shortage, a severe disease outbreak among hogs in southern China, high grain prices and a general upward trend in meat consumption. High grain prices and the increase in pork price have ramifications for other livestock sectors as consumers switch to alternate meats in response to high pork prices. As the most widely consumed and affordable meat in China, high pork prices have the attention of the central government, prompting statements from the Premier about calming the market. Specifically, the Premier ordered local governments to provide subsidies for pig production in hopes of alleviating the supply shortage.

Realistically, land constraints prevent the Chinese pork sector from expanding significantly, however China must face the reality of a growing population and increased per-capita demand for meat products. As a result of these challenges facing China, opportunities for increasing sales are high for meat exporters such as the United States.

Introduction

Meat prices in China have been rising slightly over the last six years and more dramatically over the last year, pushing the CPI upwards. These price spikes have been brought on by the increased demand for meat of a more prosperous nation and constraints on livestock industry inputs, namely feed grains. Supply shocks have also exacerbated the situation. For some meat products, particularly poultry and pork, additional aggravating factors include domestic disease outbreaks resulting in large animal deaths and cull rates. High input costs and a degree of substitutability between meats have led to increases in beef and mutton prices as well. Increases in these items however, has garnered less attention because they have traditionally been meats for wealthier Chinese who are less affected by the run-up in food costs.

To date, the most notable increase in meat prices has occurred with pork. As of the May 2007, retail prices for pork had risen more than 50% over the previous year while wholesale prices had risen close to 95% (figure 1). Prior to this year, the Chinese had kept pork prices relatively stable, except for a notable spike and recovery in price in the third quarter of 2003 which was caused by a combination of pig high fever and SARS outbreaks as well as high input costs (figure 2).

The spike in China's pork prices has alarmed the Chinese Government because it is the meat of choice for the majority of the population. Anecdotally, the word for "meat" in mandarin signifies "pork" to most of its speakers. According to the Chinese Ministry of Agriculture, the average urban Chinese ate 42 pounds of pork per person in 2006 and accounted for 60% of meat consumption. That same year, China produced 52 million tons of pork, about 50% of the world's total. China's 500 million pigs represent the country's most affordable source of meat and any sustained disruption could become problematic.

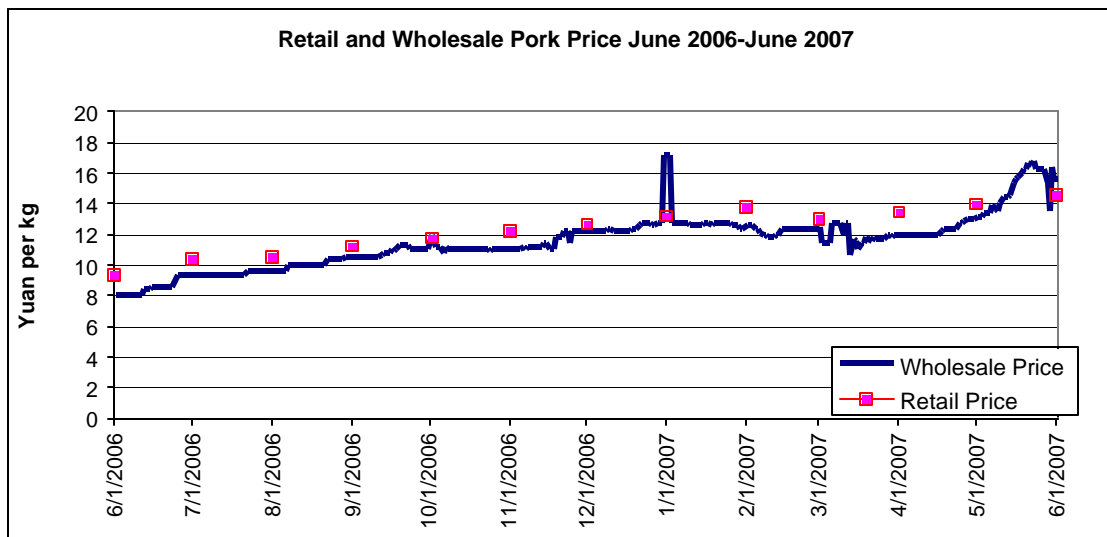


Figure 1: Wholesale and Retail Pork Price, June 2006-2007

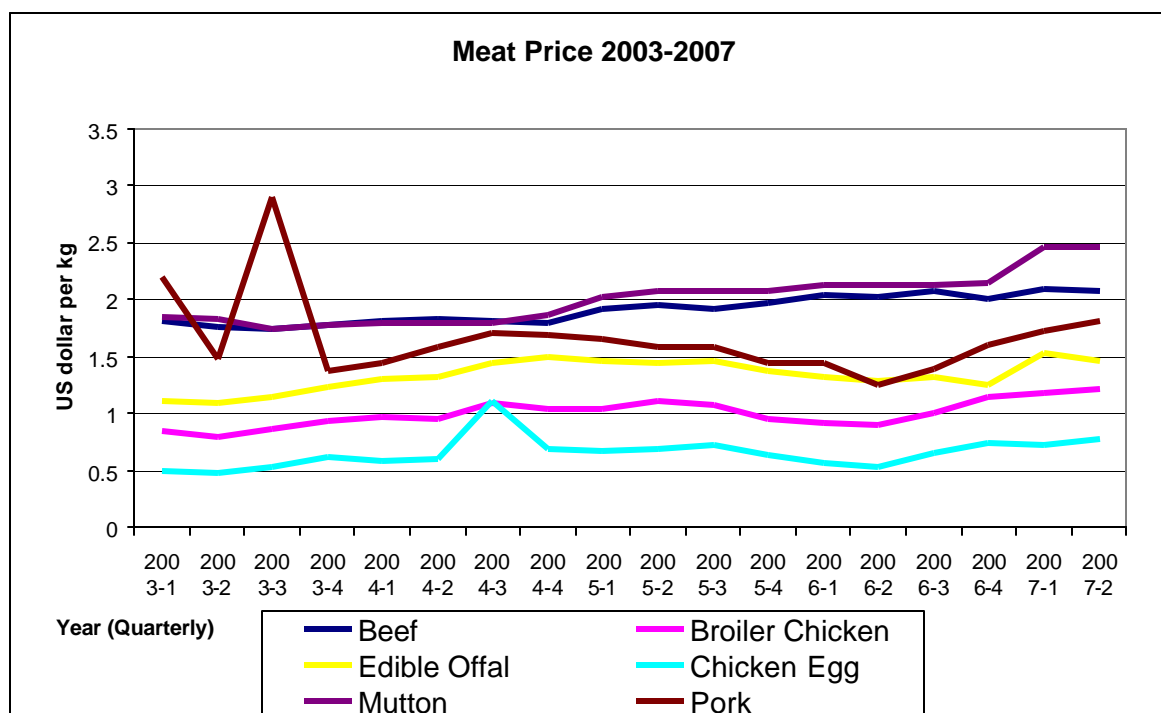


Figure 2: Select Retail Meat Prices 2003-2007

Rising Pork Prices In China Fuel CPI Increases

Rising pork prices in China have fueled inflationary fears, a particularly sensitive issue for China's policy makers trying to narrow the income gap between urban and rural residents. Increases in food prices have raised concerns about the burden on lower-income residents, particularly rural residents whose spending on food accounts for a larger share of their income than their urban counterparts.

Food prices in China account for nearly one-third of the consumer price index, which rose to 3.4% in May with food prices rising 8.3% (figure 3). Rising grain prices are also an important factor in this increase. Meat constitutes close to 7% of the CPI basket for China, and upwards price pressure has spread to eggs, fish and other products. It is possible that rising food costs, particularly rising pork costs, will push the year-on-year CPI inflation above 4% in the near future. The unofficial tolerance rate of the central bank for CPI inflation is 3%. Analysts believe the rising price of meat and eggs will exert further upward pressure on inflation in the coming months.

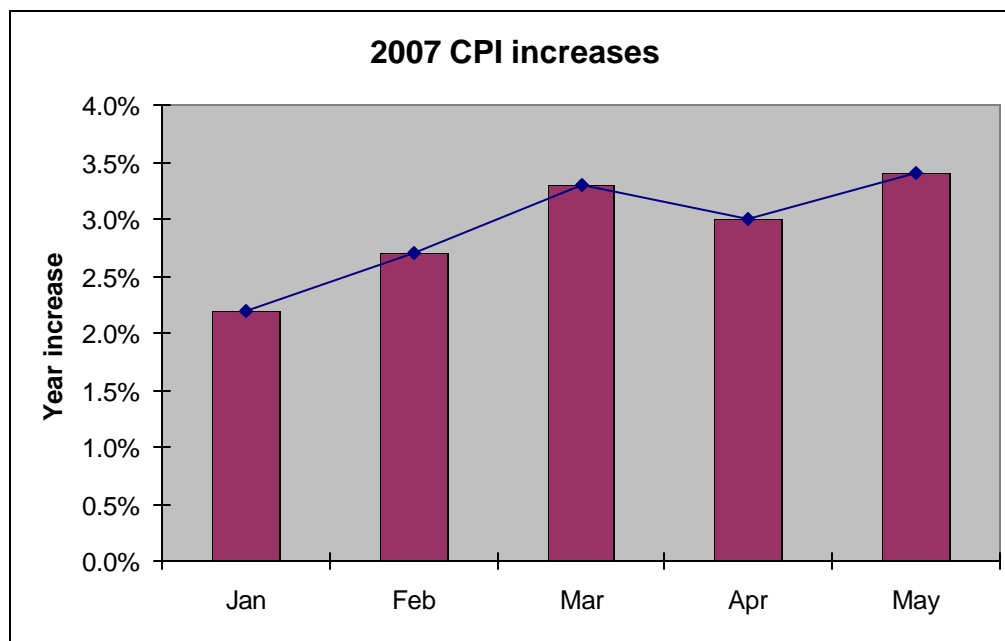


Figure 3: 2007 CPI Increases

Higher Input Costs, a Cyclical Market, Disease Outbreaks and Increased Demand Convergence Results in Higher Pork Prices

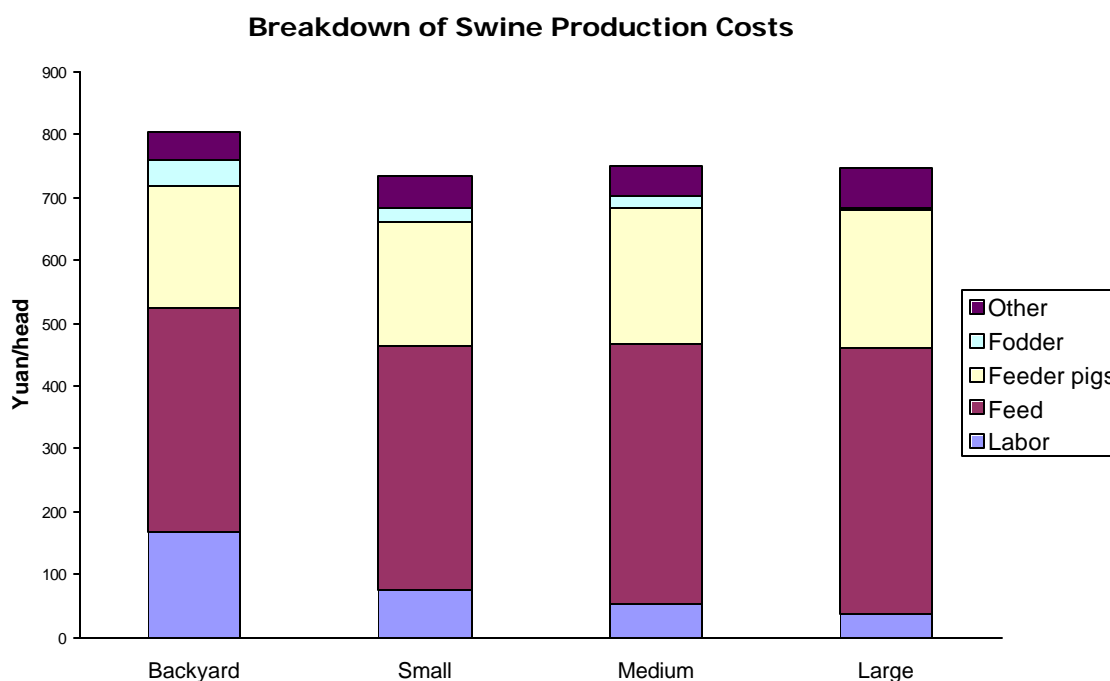
The price increase for pork can be attributed to four factors: higher input costs, supply shortages due to the cyclical pork market, recent outbreaks of swine disease within China, and an overall increased for meat in general across China. Higher input costs and the supply shortage stemming from the cyclical pork market are not completely distinct in that the high price of corn is a critical element of both events. Each of these causes is discussed in further detail below.

Increased Grain Prices Over the Past Year in China

There has been a world wide commodity price increases over the last five years affecting a host of commodities, among them corn, which is an important input for livestock sectors, and the pork sector in particular. Because corn represents such a large share of the expense of hog rearing it is likely that the increased cost of corn is the leading cause of increased pork prices in China. Moreover, the high price of corn exaggerated some of the effects of the natural pork market cycle which is discusses in the next section.

The resulting price increase for corn opened a debate both in the United States and China on how agricultural land should be allocated to food, feed, fuel and fiber. Ethanol production has been an important dynamic in this debate. China has made a concerted effort to increase its biofuels production over the last five years. The Chinese policy on bio-

fuel production has prohibited the licensing of new plants that use feedstock produced from arable land. The apparent aim is to prevent biofuels from taking a share of crops for human consumption, inevitably increasing prices. However, Chinese corn prices and the resulting effects on the price of animal feed are not immune from the global increase in commodity prices, driven by increased ethanol production, engendered by high oil prices. Figure 4 shows the composition of hog production costs. Feed represents half the cost for hog rearing on the largest farms and slightly less as farms decrease in size.



Source: China National Development and Reform Commission, Dept. of Price, Cost of production estimates.

Figure 4: Swine Production Costs in China

Moreover, other starch-related industrial demands are growing rapidly in China, soaking up surplus corn in northeastern corn producing areas and in Shandong province. Corn accounts for 70% of the feed ration for hogs in most parts of China, and corn prices have increased by over 20% during the first 5 months of 2007. Earlier price increases are more dramatic. In 2004, the corn price was 945 Yuan per MT increasing to 1100 Yuan per MT in 2005 and 1300 in 2006. In an effort to manage corn prices, China has enacted export quotas for 2007 of 4.5 MMT and 4 MMT were contracted as of March 2007. In the medium to long term, Chinese analysts predict that China will have to import corn.

As evidence of some of the increased demand on corn driving up prices (and ultimately costs to swine producers), the feed use of corn has increased by 25% in 10 years while industrial use has increased 20%. About 90% of starch use corn as a raw material and starch production capacity was 29 MMT in 2006 and expected to reach 35 MMT in 2007. Figure 5 provides an illustration of the correlation between pork and corn prices.

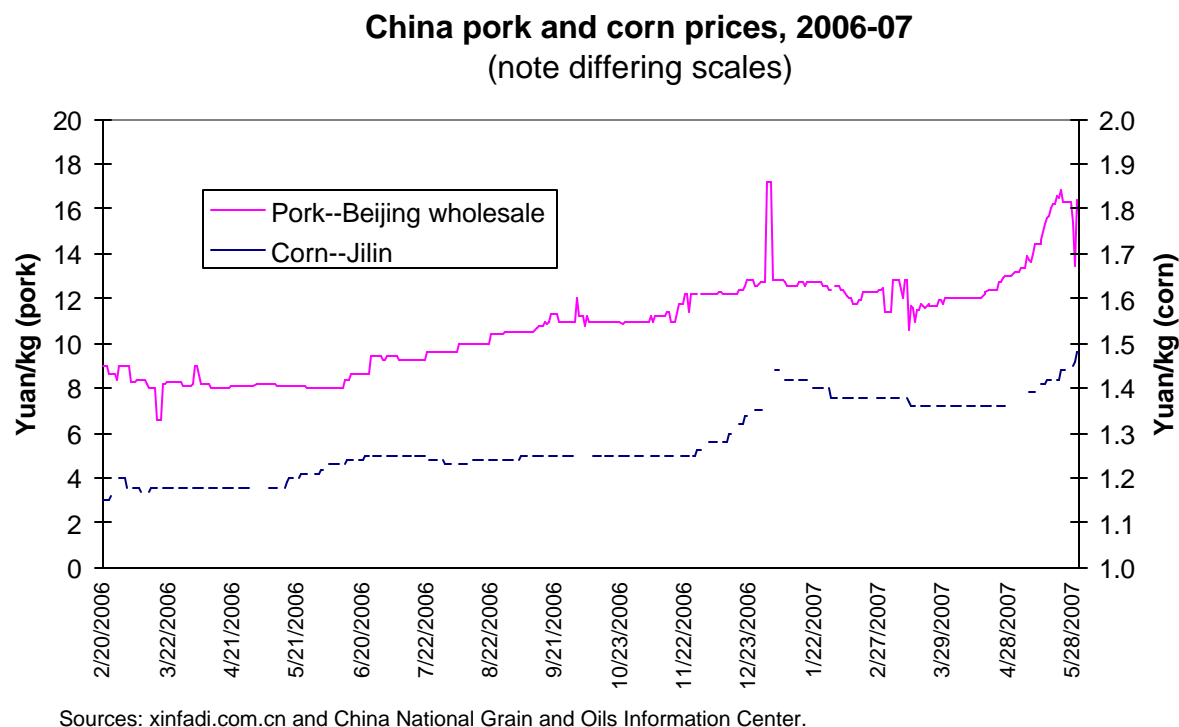
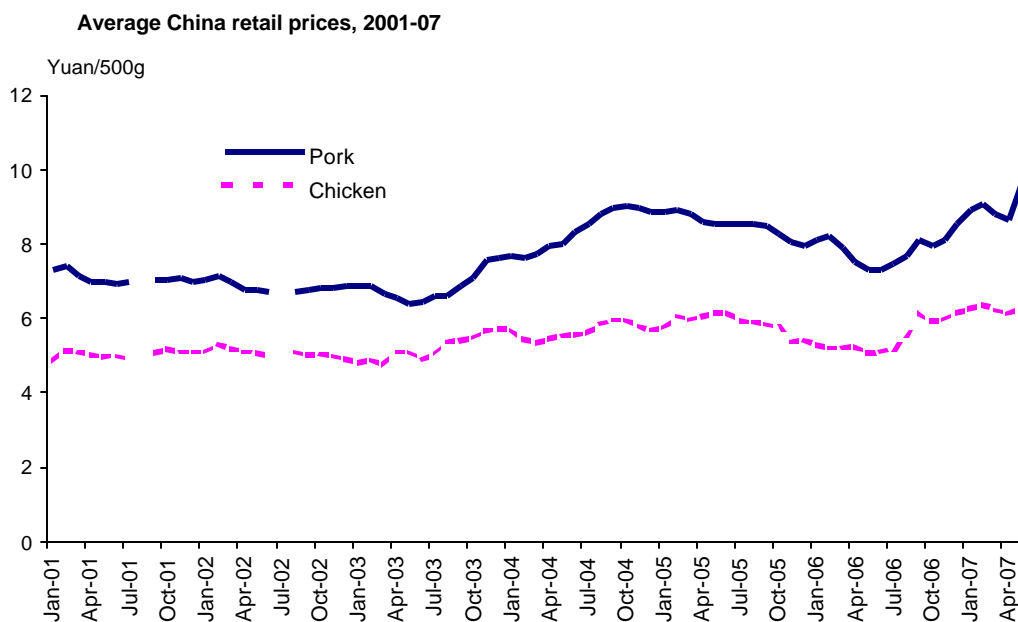


Figure 5: Pork and Corn Price Correlation, 2006-2007

Cyclical Pork Market

Increased corn prices have likely exaggerated the shifts in supply associated with the natural market cycle for pork. Pork prices dropped sharply in the first half of 2006 while corn prices remained high. Consequently, hog profitability plummeted and many farmers reduced numbers of hogs being reared. This led to a marked reduction in the supply of 2007, despite the fact that it only takes 4-6 months for commercially produced hogs to reach market weight. Figure 6 illustrates the cyclical nature for both pork and poultry over a six-year period as well as the general upward trend for both prices.



Source: China National Development and Reform Commission, Price Information Center, chinaprice.gov.cn.

Figure 6: Cyclical Nature of Pork and Poultry Markets

Recent Domestic Disease Outbreaks Driving Swine Price Increases

A recent outbreak of Porcine Reproductive and Respiratory Syndrome (PRRSV), better known as blue ear disease in China, has received international coverage because of its impact on Chinese pork prices and the high number of pig deaths and culling, despite MOA reports of much lower numbers. The MOA held a press conference on Monday, June 11 to explain the situation, but reported fewer than 20,000 pig deaths, far lower than the industry reports of millions.

PRRSV is an infectious illness characterized by reproductive disorder, premature delivery, miscarriage, and stillbirth, as well as abnormal breathing in piglets. For some strains, when pigs contract the disease, it not only spreads extremely fast, but morbidity and mortality is also high. Reportedly, many herds around the world are affected with strains of the virus that have no visible symptoms.

To date, it appears that PRRSV has not affected pork consumption in China as consumers may be becoming desensitized to frequent reports of animal disease outbreaks.

There has been much speculation to the reasons behind the recent PRRSV outbreak, but in general, China's swine sector is small scale and faces huge challenges of improving feed,

strengthening bio-security measures and utilizing effective vaccines. In response, the Chinese provincial governments, with cooperation from MOA, began mass sterilization in places affected by the disease, as well as in pig houses and slaughterhouses, prohibited the transport and slaughter of live pigs from affected areas, buried dead pigs and stepped-up sterilization, vaccination and supervision efforts to prevent further spread of this pig disease.

As China is the producer of 50% of the world's hogs, swine epidemics in this country take on regional, if not global significance, potentially impacting both production and trade.

Increased Demand for Meat and a Growing Livestock Sector

With rising incomes, China's pork consumption has also been increasing. More broadly, China's livestock sector continues to expand at 3-5% annually due to strong meat demand, favorable government policies, and adoption of improved technology. Between 1978 and 1996, the sector grew by 10% annually, and by another 5% between 1996 and 2007. Because nation-wide consumption of meats is not reported officially, in part due to the difficulty of estimating consumption that occurs outside the home, FAS China is now undertaking a consumption study of food groups, including the meat sector. Figure 7 shows the increases in domestic production from 1990-2007. It is estimated that the average Chinese consumed 39.6 kilograms of pork in 2006, 1.3 kilograms more than in 2005, despite the fact that there were fewer pigs in China.

China's pork imports have nearly doubled since 1990 amounting to 401,000 MT in 2006 (figure 8). Imports represent only a small share of production, with substantial room for growth due to the constraints on China to expand output. As evidence, during 2006, U.S. pork exports to China (including Hong Kong) exceeded \$100 million, a new record, and shipments to date are on track to set another record.

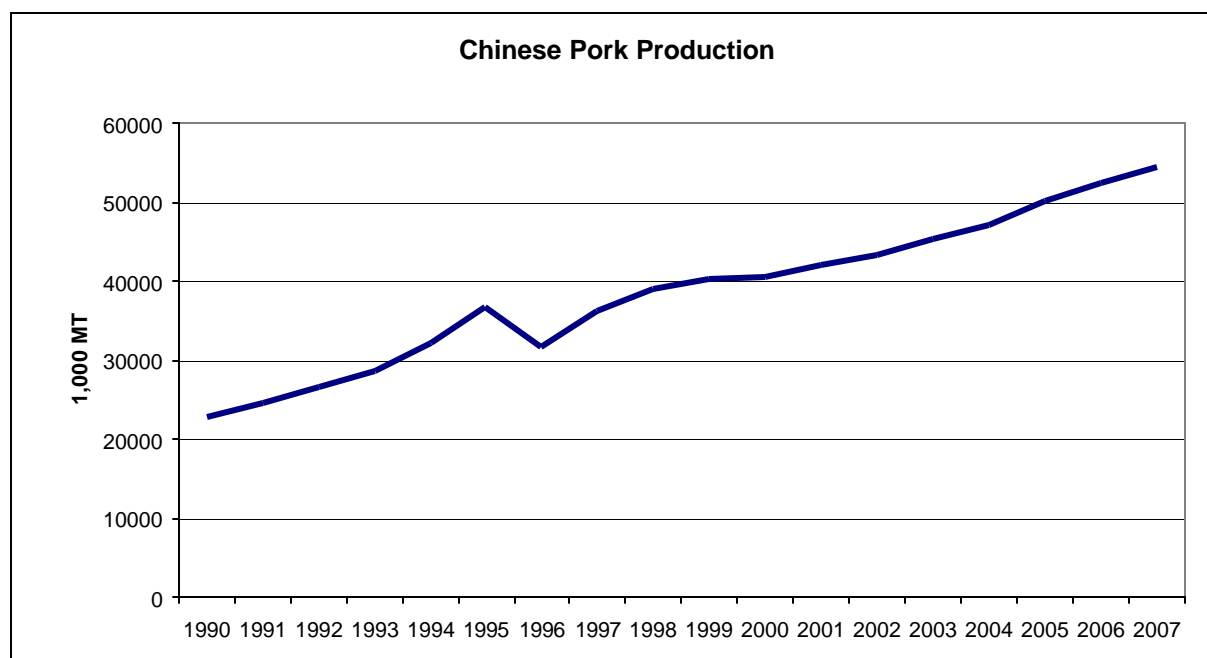


Figure 7: Chinese Pork Production 1990-2005

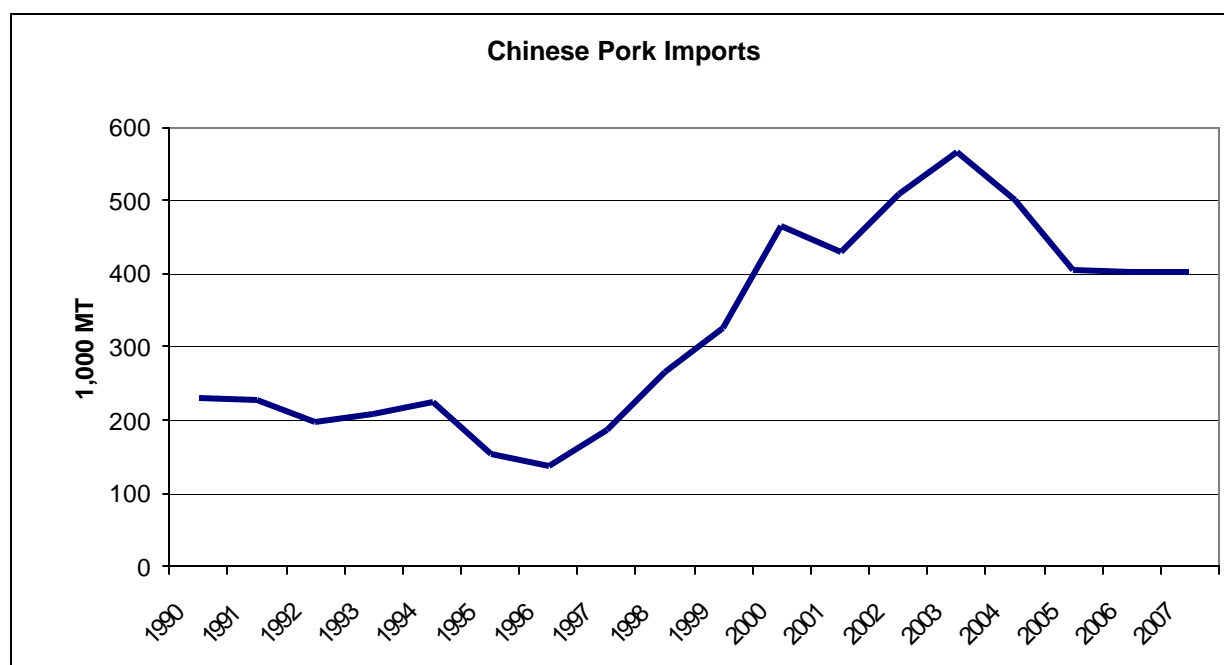


Figure 8: Chinese and HK Pork Imports

Income and price elasticities for pork are the lowest of all meats in China, suggesting that the price of pork and income level of the consumer are less relevant in determining the amount consumed, because pork is a staple in the Chinese diet. Pork is also a less

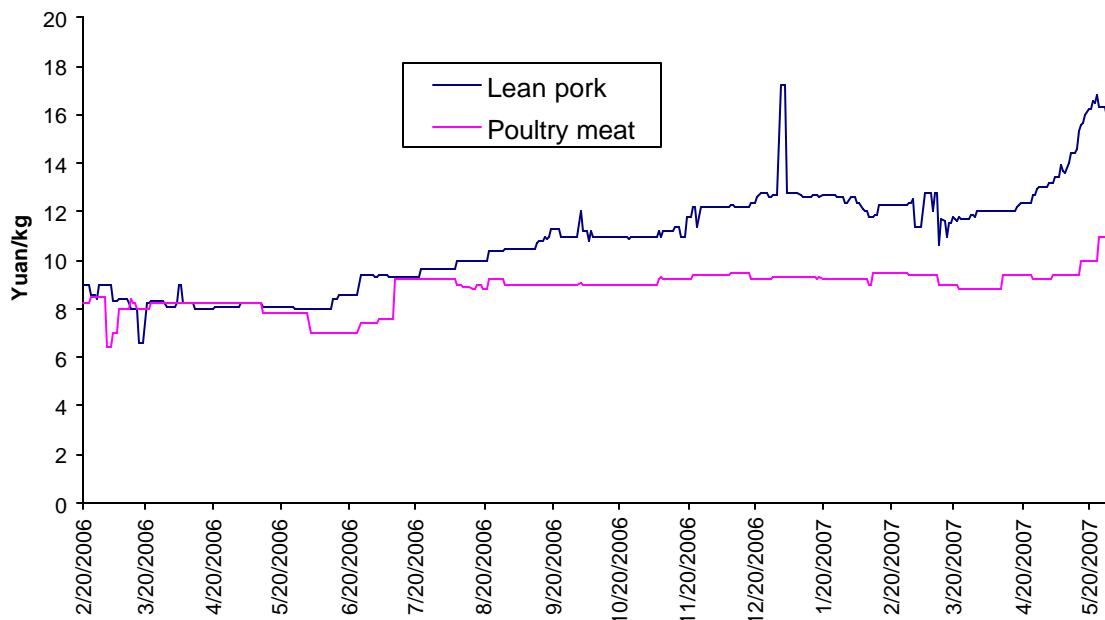
expensive meat relative to others, and consumer preference is oriented to pork. If and when consumers will substitute pork for other meats when the pork price becomes too high remains unclear, though some industry sources believe this substitution has already begun. Additionally, during the hot summer months, consumer preferences naturally shift away from pork to seafood and vegetables.

Meat production has increased by over 200% since 1990, and during that time prices have trended significantly upwards until very recently. As a result, FAS China believes that the current upward trend on meat prices in general, and pork prices specifically, is a supply-side phenomenon driven by an unusually sharp upturn in the hog price-cycle magnified by the combination of the blue ear disease and rising feed prices. Nevertheless, strong demand for meat in China is an important reality with potentially positive ramifications for the US as an exporter of meat.

Price Increases for Other Meats

Because of the supply side impacts of disease and high grain prices, the prices of pork have increased more dramatically than the price for other meats in China. However, grain is an important feed for other livestock, particularly cattle and poultry, and price increases have occurred in these sectors too. Additionally, some economists are speculating that there has been some substitution of pork for other meats, spreading out the price increase across these sectors. An illustration of the price correlation between wholesale pork and chicken price is given in figure 9. Between March 2006 and 2007 retail chicken prices have increased by 33% while chicken egg prices have increased by over 40%, testament to the price correlation with pork and high corn prices, which are also an important component of poultry feed.

Average price of pork and poultry, Xinfadi wholesale market, 2006-07



Note: "Bai tiao rou" and "bai tiao ji" prices reported on xinfadi.com.cn.

Figure 9: Poultry Prices Track Pork Prices

Government Response

During May 2007, Premier Wen Jiabao made public appearances on state television to address citizen concerns over higher prices and inflationary trends in general. Moreover, he made publicized visits to Chinese swine and other farms. He is quoted as saying "the pork price hike should have a limit, because some urban residents can't afford it" and that the situation "needs a market adjustment".

To address the issue, Wen convened an emergency cabinet meeting ordering local governments to increase food assistance to low-income families and to encourage pig rearing through grower subsidies. The Chinese Government has also called for strategic pork and live pig reserves they claim can be used in the event of severe food shortages. Additionally, the government states it will implement better disease prevention, larger-scale breeding programs, production subsidies and risk insurance for hog farmers. To date, these proposed government reforms lack specifics. Individual provinces have also taken specific actions. Notably, Guangzhou Province promised to give a monthly payment of 20 Yuan for every low-income families during May, June and July to "help offset the higher prices of pork and non-

staple foods". A 20 Yuan direct payment amounts to less than 3% of an average low-income salary in Guangzhou of 780 Yuan per month (according to online PRC data).

Situational Outlook

It appears the pork price increases are curtailing, but only to the extent that the price has plateaued and does not appear to be dropping substantially. In Beijing, for example, the wholesale price of pork on July 13th, 2007, was 14.8 Yuan per kilo, 2 Yuan lower than the price on May 25th. The summer season also brings the highest prices of the year for corn. Further, the heat and humidity in Southern China reportedly leads to an increased risk of disease, in general.

Other factors that could impact pork price changes (i.e., possibly lowering price) include market corrections (i.e., higher prices encourage more production), as well as seasonal preferences in food (more consumption of fish and vegetables in the summer), and the impact of government programs to stimulate swine sector growth.

The increased meat prices in general, and pork prices in particular, in China may provide a window of opportunity for foreign producers. Figure 10 shows the price competitiveness of U.S. hog production with that of China. Chinese hog production costs range from \$45-\$52 per hundred pounds, while U.S. production costs are just under \$50 per hundred pounds. In the United States, the price of a feeder pig is a larger component of the total hog price, while in China the finishing costs ("other costs") are more important. Included in finishing costs are animal feed (of which corn is a large component), meaning that the price of corn is relatively more important as a hog price determinant in China.

As a result, all other factors equal, as corn prices in China increase, U.S. pork prices become more competitively priced in the Chinese market.

China and US Hog Production Costs

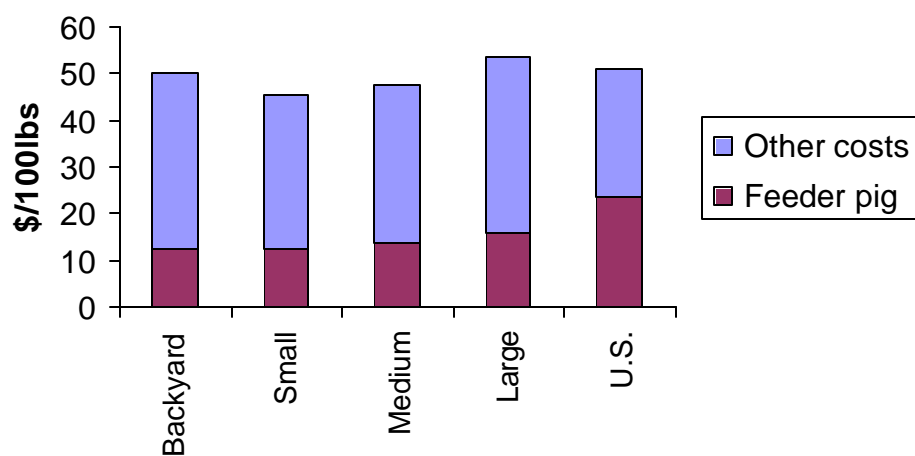


Figure 10: China and US Hog Production Costs

End of report.